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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,174	08/23/2001	Kin K. Leung	ATT-025PUS	1612
22494	7590	12/02/2005	EXAMINER	
DALY, CROWLEY, MOFFORD & DURKEE, LLP SUITE 301A 354A TURNPIKE STREET CANTON, MA 02021-2714			PATEL, HARESH N	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,174

Applicant(s)

LEUNG ET AL.

Examiner

Haresh Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 11, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-15 are subject to examination.

Priority

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Drawings

3. The figures 1-7 filed on 08/23/2001 are acknowledged. However, for example, figure 1 contains handwritten numbering of the elements; hence, applicant is requested to submit formal drawings. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 11, 13 and 15 are objected to because of the following informalities:

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Claim 11 is missing "." (period) after "music service".

Claim 13 mentions, "multiplying said transmission power level by said signal path gain and dividing by said predicted interfere power level", which should be, "multiplying value of said transmission power level by value of said signal path gain and dividing by value of said predicted interfere power level".

Claim 15 mentions, "said signal-to-interference-plus-noise ratio multiplying by predicted interference power level divided by said signal path gain", which should be, "value of said signal-to-interference-plus-noise ratio multiplying by value of predicted interference power level divided by value of said signal path gain".

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 11-20 of Leung, U.S. Patent No. 6,519,705.

Although the conflicting claims are not identical, they are not patentably distinct from each other

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because the patent teaches all the limitations as disclosed such that the interpretation of utilizing a power control technique to adjust a transmission power using a predetermined error rate in a wireless network is similar to a power control by selecting a transmission power based on an interference power value and an estimated error margin in a wireless network. The claimed subject matter of claims 1-7 and 11-20 of Leung, U.S. Patent No. 6,519,705 does not specifically mention about streaming service, music delivery service and the power control technique utilized in combination with a link adaptation technique. However, it is well known in the art; for example, Denkert et al., 6,374,117 (Hereinafter Denkert) teaches the concept of streaming service and the power control technique utilized in combination with a link adaptation technique. Kataoka discloses a concept of using a music delivery service comprising a MPEG-4 Advanced Audio Coder music service (channel providing MPEG-4 AAC information, col., 12, lines 42 - 50). With the teachings of well-known arts, i.e., Denkert's, etc., it would be obvious to one of ordinary skill in the art to include the concept of streaming service, music delivery service and the power control technique utilized in combination with a link adaptation technique with the claimed subject matter of claims 1-7 and 11-20 of Leung, U.S. Patent No. 6,519,705.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert et al., 6,374,117, (Hereinafter Denkert) in view of Sindhushayana et al., 6,760,313 (Hereinafter Sindhushayana).

7. As per claim 1, Denkert discloses a method (abstract) of providing a streaming service (col., 4, lines 10 – 28, col., 2, lines 13 – 22) in a wireless packet (abstract) network (figure 2) comprising the steps of:

utilizing a link adaptation technique (usage of link adaptation function, col., 6, lines 50 – 55) to adapt a modulation (modulation, col., 6, lines 41 – 43) and coding level (amount of coding, col., 6, lines 60 – 67) to achieve a error rate (determining error rate, col., 4, lines 50 – 58) for transmission of data packets (sending number of packets, col., 5, lines 53 – 59),

utilizing a power control technique (usage of power control techniques, col., 5, line 66) to adjust a transmission power to a level (greater transmission power, col., 6, lines 1 – 13) which provides desirable performance (base on requirement, col., 6, lines 1 – 13),

said power control technique (usage of power control techniques, col., 5, line 66) utilized in combination with (power control technique linked with link adaptation functionality, col., 5, line 66 – col., 6, line 13) said link adaptation technique (usage of link adaptation technique, col., 6, lines 5 – 8); and

transmitting said packets of data (transmitting of number of packets, col., 5, lines 42 – 48) in accordance with said modulation and coding level and with said transmission power (power control technique and with modulation and coding level, col., 5, line 66 – col., 6, line 13).

However, Denkert does not mention about predetermined error rate.

Sindhushayana discloses concept of using predetermined error rate (target PER, col., 9, lines 44 – 65, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert with the teachings of Sindhushayana in order to facilitate usage of predetermined error rate because the predetermined error rate would enhance supporting adaptive rate selection in a communication system. The predetermined error rate would be used to calculate packet error rate probabilities for a given data rate.

8. As per claim 4, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. Denkert also discloses the streaming service is provided over a cellular network (col., 7, lines 5 – 12).

9. As per claim 5, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert does not mention about predetermined error rate comprising a non-zero error rate.

Sindhushayana discloses usage of predetermined error rate comprising a non-zero error rate (non-zero value of target PER, col., 9, lines 44 – 65, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert with the teachings of Sindhushayana in order to facilitate usage of predetermined error rate comprising a non-zero error rate because the non-zero predetermined error rate would enhance supporting adaptive rate selection in a communication

system. The non-zero predetermined error rate would be used to calculate packet error rate probabilities for a given data rate.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Lee et al., 6,690,944 (Hereinafter Lee).

11. As per claim 2, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert does not mention about a relationship between the error rate and a signal-to-interference-noise ratio.

Sindhushayana discloses a concept of relationship between the error rate and a signal-to-interference-noise ratio (col., 10., lines 59 – 63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert with the teachings of Sindhushayana in order to facilitate a relationship between the error rate and a signal-to-interference-noise ratio because the error rate corresponding to the signal-to-interference-noise ratio would enhance supporting the link adaptation in the communication system. The error rate would be used to calculate packet error rate probabilities for a given data rate.

Denkert and Sindhushayana do not mention about signal-to-interference-plus-noise ratio.

Lee discloses a concept of using signal-to-interference-plus-noise ratio (col., 4, lines 46 - 58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Lee in order to facilitate usage of signal-to-interference-plus-noise ratio because the signal-to-

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interference-plus-noise ratio would enhance supporting the link adaptation in the communication system. The signal-to-interference-plus-noise ratio would be used to keep noise floor same for all the communication mechanism and would be used to generate power control information.

12. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Kataoka et al., 6,282,209 (Hereinafter Kataoka).

13. As per claims 3 and 11, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert and Sindhushayana do not disclose about a music delivery service comprising a MPEG-4 Advanced Audio Coder music service.

Kataoka discloses a concept of using a music delivery service comprising a MPEG-4 Advanced Audio Coder music service (channel providing MPEG-4 AAC information, col., 12, lines 42 - 50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Kataoka in order to facilitate using a music delivery service comprising a MPEG-4 Advanced Audio Coder music service because the MPEG-4 Advanced Audio Coder music service would enhance supporting media information in MPEG-4 Advanced Audio Coder format. The formatted information would be used to provide streaming service in the wireless packet network.

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14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Forslow, U. S. Publication 2003/0039237 (Hereinafter Forslow).

15. As per claim 6, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert and Sindhushayana do not disclose usage of packet-switched bearers.

Forslow discloses a concept of using packet-switched bearers (establishing packet-switched bearers, paragraph 23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Forslow in order to facilitate using packet-switched bearers because the bearer would support bearing or carrying information from the mobile station through the mobile communications network towards the external network entity and to carry information from the external network entity through the mobile communications network to the mobile station.

16. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Jamal et al., 5,901,186 (Hereinafter Jamal).

17. As per claim 7, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert and Sindhushayana do not disclose usage of applying error-concealment techniques to the data packets at a receiving end.

Jamal discloses a concept of applying error-concealment techniques to the data packets at a receiving end (col., 2, lines 43 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Jamal in order to facilitate applying error-concealment techniques to the data packets at a receiving end because the error-concealment techniques would support reducing the negative effects of bit errors on the reconstruction of the signal. The error-concealment techniques supported information would be used to provide streaming service in the wireless packet network.

18. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Frodigh et al., 6,122,293 (Hereinafter Frodigh).

19. As per claim 8, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert and Sindhushayana do not disclose link adaptation technique performed at periodic intervals.

Frodigh discloses a concept of link adaptation technique performed at periodic intervals (col., 3, lines 25 - 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Frodigh in order to facilitate link adaptation technique performed at periodic intervals because the periodic intervals would support overcoming poor quality of transmission during the previous

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interval. Hence, the quality of transmission would increase in providing streaming service in the wireless packet network.

20. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Raissinia et al., 6,408,165 (Hereinafter Raissinia).

21. As per claim 9, Denkert and Sindhushayana disclose the claimed limitations rejected under claim 1. However, Denkert and Sindhushayana do not disclose power control technique performed at periodic intervals.

Raissinia discloses a concept of power control technique performed at periodic intervals (col., 2, lines 43 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Raissinia in order to facilitate power control technique performed at periodic intervals because the periodic intervals would support overcoming poor response for reaction during the previous interval. Hence, the response for reaction would increase in providing streaming service in the wireless packet network.

22. Claims 10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert, Sindhushayana and Lee in further view of Mitra, 5,551,057 (Hereinafter Mitra) and Hick et al., 6,526,260 (Hereinafter Hick).

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23. As per claim 10, Denkert, Sindhushayana and Lee disclose the claimed limitations rejected under claims 1 and 2. However, Denkert, Sindhushayana and Lee do not disclose usage of a signal path gain, a transmission power level and interference power level.

Mitra discloses a concept of using a signal path gain, a transmission power level and interference power level (col., 3, lines 15 - 31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert, Sindhushayana and Lee with the teachings of Mitra in order to facilitate usage of a signal path gain, a transmission power level and interference power level because the signal path gain, the transmission power level and the interference power level would support providing streaming service in the wireless packet network.

However, Denkert, Sindhushayana, Lee and Mitra do not disclose predicted interference power level.

Hick discloses a concept of using predicted interference power level (col., 2, lines 46 - 56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert, Sindhushayana, Lee and Mitra with the teachings of Hick in order to facilitate usage of predicted interference power level because the predicted value of the interference power level would support predicting the change in the inter-modulation interference power level from a given change in the power level of the channel contributing to the interference.

24. As per claims 13 and 15, Denkert, Sindhushayana, Lee, Mitra and Hick disclose the claimed limitations rejected under claims 1, 2 and 10.

Lee also discloses a concept of multiplying and dividing power adjustment parameters for estimation (col., 4, lines 46 – 59, col., 13, line 31 – col., 14, line 18, figures 2, 4 and 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert, Sindhushayana, Lee, Mitra and Hick in order to facilitate usage of multiplying and dividing power adjustment parameters for estimation because the power adjustment parameters would support providing estimation of the signal-to-interference-plus-noise-ratio and transmission power level. The estimated values of the signal-to-interference-plus-noise-ratio and transmission power level would be utilized to support streaming information with a quality of transmission to a device in a wireless packet network.

25. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert and Sindhushayana in further view of Budka et al., 6,856,812 (Hereinafter Budka).

26. As per claim 12, Denkert and Sindhushayana disclose the claimed limitations rejected under claims 1 and 4. However, Denkert and Sindhushayana do not disclose about an Enhanced General Packet Radio Service cellular network.

Budka discloses a concept of using an Enhanced General Packet Radio Service cellular network (EGPRS, col., 19, lines 53 - 58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert and Sindhushayana with the teachings of Budka

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in order to facilitate using an Enhanced General Packet Radio Service cellular network because the Enhanced General Packet Radio Service cellular network would support streaming service that would be used for communicating information from one device to another device over the network.

27. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert, Sindhushayana, Lee, Mitra and Hick in further view of Karr et al., 6,952,181 (Hereinafter Karr)

28. As per claim 14, Denkert, Sindhushayana, Lee, Mitra and Hick disclose the claimed limitations rejected under claims 1, 2 and 10. However, Denkert, Sindhushayana, Lee, Mitra and Hick do not disclose usage of a maximum transmission power level.

Karr discloses a concept of using a maximum transmission power level (col., 25, lines 25 - 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Denkert, Sindhushayana, Lee, Mitra and Hick with the teachings of Karr in order to facilitate usage of a maximum transmission power level because a value of the maximum transmission power level would support adjusting wireless signal strength and the adjusted wireless signal strength would support streaming information with a quality of transmission to a device in a wireless packet network.

Conclusion


29. The prior art made of record (see form PTO-892) and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (571) 272-3973. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Haresh Patel
October 24, 2005


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